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TITLE: HYDRAULIC COMPLEX MATERIAL

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ABSTRACT:

PROBLEM TO BE SOLVED: To provide a hydraulic complex material with which high strength concrete having compressive strength of 100 N/mm² or more and being controlled in an autogenous shrinkage and drying shrinkage can be obtained by solving the problems that the autogenous shrinkage and the drying shrinkage are caused and that high compressive strength is still difficult to be realized by a method that the concrete in which the unit amount of the cement is increased, in which a high performance AE (air-entraining) water reducer and the like are used and whose water-cement ratio is lowered, although the method is proposed for the requirement of a high strength concrete development in recent years.

SOLUTION: The high strength concrete having compressive strength of 100 N/mm² or more is blended with water, cement, a fine aggregate, a coarse aggregate, silica powders whose specific surface area is 50,000-200,000 cm²/g and an expansive material. The blending rate of the expansive material is 1-10 vol% to the total amount of the cement and the silica powders. The blending rate of the silica powders is 5-

15 vol% to the total amount of the cement and the silica powders. The water-binder ratio is less than 15–25%.

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